

# Meningococcal Disease

## Information for the Public

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### What is meningococcal Disease?

Meningococcal disease is a severe bacterial infection that can cause meningitis (a medical condition caused by inflammation of the protective membranes covering the brain and spinal cord, known collectively as the meninges), bloodstream infection and other localized infections. Although the disease is not common in the United States, in those who get it, symptoms develop and progress rapidly even leading to death in 24-48 hours.

People with meningococcal meningitis may have fever, headache, nausea, vomiting, a stiff neck, mental status changes and rash. Even with appropriate antibiotic treatment, the fatality rate is 9 to 12%. About 20% of survivors from the disease have permanent sequelae, such as hearing loss, neurologic damage, or loss of a limb.

People with bloodstream infection (meningococcal bacteremia) may have sudden onset of fever and in severe cases a petechial rash (small red or purple spots on the skin) or purpuric rash (red or purple discolorations on the skin).

### What causes meningococcal disease?

Meningococcal disease is caused by the bacteria *Neisseria meningitidis*, also called meningococcus.

### How is meningococcal disease spread?

Meningococcus is spread from one person to another by direct contact with secretions from the nose and throat that contain the bacteria. Examples include:

- Sharing eating utensils or drinking cups, water bottles, cans, drinking straws, toothbrushes
- Kissing on the mouth
- Sharing a cigarette or a lipstick, toys, mouth guards, musical instruments with mouthpieces
- Mouth-to-mouth resuscitation

Meningococcal disease can also spread in very crowded situations, including:

- Daycares
- Barracks
- Jails

Meningococcal disease is **not** spread by:

- Being in the same room as the person who got the disease (without sharing secretions from the nose and throat), e.g., the same workplace or classroom; or

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- Knowing someone who knows a person who got meningococcal disease

### Who is most at risk for meningococcal disease?

People who have certain medical conditions are at higher risk, including:

- Those with terminal complement pathway deficiency (a type of immune deficiency)
- Those who do not have a spleen

Certain factors may place individuals at higher risk, including:

- Close contacts of patients with meningococcal disease
- Smokers and people who have exposure to tobacco smoke
- HIV infection
- Recent cold or upper respiratory infection
- Household crowding

Many people can carry the meningococcal bacteria in their nose or throat without getting ill. In this way, many people become immune to meningococcal disease by adulthood. That is why healthy adults are at low risk for meningococcal disease.

### What can I do to protect myself from meningococcal disease?

#### 1. Antibiotics

A person **needs to take antibiotics** to prevent meningococcal disease if he/she:

- Lives in the same house with a person who developed meningococcal disease;
- In the last seven days, attended the same daycare classroom as the person who got meningococcal disease;
- Shared a toothbrush, eating utensils, or drinking cup with a person who got meningococcal disease;
- Frequently eats or sleeps in the same house as the person who got meningococcal disease; or,
- Kissed the mouth of a person who got meningococcal disease.

A person **does not need antibiotics** to prevent meningococcal disease if he/she:

- Did not have direct contact with the saliva of a person who got meningococcal disease, e.g., a school or workmate;
- Knows someone who knows a person who got meningococcal disease; or,
- Was exposed to someone with meningococcal disease more than 10 days ago and is well.

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Talk to your local health department to help you determine if you need antibiotics.

### 2. Vaccinate

There are two types of meningococcal vaccines available in the United States, but are only recommended for persons at risk for meningococcal disease:

- Meningococcal conjugate vaccine (MCV4) is licensed for people 2-55 years of age, and is the preferred vaccine in that age group.
- Meningococcal polysaccharide vaccine (MPSV4) is licensed for persons age 2 and older.

**MCV4** provides protection against 4 meningococcal serotypes (A, C, Y, W135). In the U.S., almost all cases are caused by serogroups B, C, and Y. Currently, there is no licensed vaccine that protects against serogroup B in the U.S. and it is recommended for:

- All children during their routine visit to their doctors (11-18 years of age);
- Children at high school entry who have never received MCV4 previously;
- Other adolescents who wish to reduce their risk of meningococcal disease;
- College freshmen living in dormitories;
- People who are routinely exposed to meningococcal bacteria such as laboratory worker (microbiologists);
- Other high risk individuals (talk to your doctor to determine your risk)

**MPSV** is approved for persons  $\geq 2$  year of age and it is not recommended for routine vaccination of civilians. This vaccine should be used only for persons who are at increased risk of *N. meningitidis* infection, who are 2 years and older and if MCV is not available.

The following individuals should not get meningococcal vaccine or should wait:

- Anyone who has ever had a severe (life-threatening) **allergic reaction to a previous dose** of either meningococcal vaccine should not get another dose.
- Anyone who has a severe (life threatening) **allergy to any vaccine component** should not get the vaccine. Tell your doctor if you have any severe allergies.
- Anyone who is **moderately or severely ill** at the time the shot is scheduled should probably wait until they recover. People with a mild illness can usually get the vaccine.

Meningococcal vaccines may be given to pregnant women. However, MCV4 is a new vaccine and has not been studied in pregnant women as much as MPSV4. It should be used only if clearly needed.

For more information about meningococcal vaccines, please read *Meningococcal Vaccines: What You Need to Know* on <http://www.immunize.org/vis/menin06.pdf>.

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### 3. Hygiene

- a. Wash your hands with soap and water frequently
- b. Do not share eating utensils or drinking cups, water bottles, cans, drinking straws; personal items such as toothbrushes, lipsticks, cigarettes, toys, mouth guards, musical instruments with mouthpieces

### What is an outbreak of meningococcal disease?

West Virginia has about 10 to 20 cases of meningococcal disease every year. An outbreak is an unusual increase above this expected number of cases. To detect the presence of outbreaks, West Virginia's local health departments:

- Thoroughly investigate every reported case of meningococcal disease; and
- Give antibiotics to persons who need them to prevent illness.

This prevention activity goes on every time a case of meningococcal disease is reported.